

Key

AP STAT- WARM UP

2nd half of Ch. 4 and Ch. 5

1) Use the following data: {5, 7, 8, 10, 12, 15, 17, 20, 30, 31, 22, 25, 28, 33, 34, 35, 39, 40}.

a. Find the following statistics:

Mean: 22.833

Median: 23.5

Range (number): 35

IQR: 21

b. Create a boxplot for the data



c. Suppose we add the data point 62 to the set of data. Indicate how the statistics in part (a) would change: increase, decrease, or stay about the same.

Mean: increase

Median: same

Range (number): increase

IQR: same

The following are quiz scores from two Algebra 1 Classes.

Class 1: 68, 93, 53, 100, 77, 86, 91, 88, 72, 74, 66, 82 and Class 2: 77, 91, 82, 68, 75, 72, 85, 65, 70, 79, 94, 86

7) Compare the means of the class scores. Which would you rather be in?

$$\bar{x}_1 = 79.167$$

$$\bar{x}_2 = 78.667$$

Class 1

8) Compare the standard deviations. Which class was more consistent in their scores?

$$s_1 = 13.36$$

$$s_2 = 9.18$$

Class 2

Based solely on the mean and median given, decide on the shape of the distribution

9) Mean = 100

Median = 98

roughly sym.

10) Mean = 20

Median = 41

left skew

11) Mean = 934

Median = 850

right skew

Given the data below, decide which summary statistics are more appropriate to report (mean & std. dev, or median & 5# summary)

12) {3, 4, 4, 4, 5, 6, 6, 7, 8, 10, 11, 11, 16, 17, 20, 25, 28, 30, 31, 39, 45, 59, 68, 73}

right skew \Rightarrow Median + 5# summary

13) {15, 20, 22, 25, 28, 30, 31, 32, 33, 34, 35, 36, 36, 37, 37, 38, 38, 40, 41, 45, 47, 51, 52, 57, 42, 49, 48, 51}

roughly sym \Rightarrow mean + std. dev.

14) Give a set of numbers that would have a standard deviation of 0

any set where all points are same value.